

CLAIMS

1. An information processing system including an electronic apparatus, a server, and an external apparatus, wherein

5 the electronic apparatus comprises:

an operation information acquirer (hereinafter, the acquirer) for acquiring first operation information from the server, the electronic apparatus operating with the first operation information; and

10 an operation controller for directing so that the electronic apparatus operates according to the first operation information,

the external apparatus comprises:

15 an external information storage (hereinafter, the first storage) for storing an external apparatus identifier, the external apparatus identifier identifying the external apparatus;

20 a setting information acceptor (hereinafter, the first acceptor) for accepting input of an electronic apparatus identifier, the electronic apparatus identifier identifying the electronic apparatus, and of the first operation information; and

25 an operation setting information transmitter (hereinafter, the first transmitter) for transmitting the external apparatus identifier, the electronic apparatus identifier, and the first operation information, to the server,

and

the server comprises:

an operation information control table storage
(hereinafter, the second storage) for storing an operation
5 information control table including at least one operation
information control record, the record including the external
apparatus identifier, the electronic apparatus identifier, and
the first operation information;

an operation setting information receiver (hereinafter,
10 the first receiver) for receiving the external apparatus
identifier, the electronic apparatus identifier, and the first
operation information, from the external apparatus; and

an operation information updating part (hereinafter,
the first updating part) for updating the operation
15 information control table, according to the external
apparatus identifier, the electronic apparatus identifier, and
the first operation information.

2. The information processing system according to claim 1,
20 wherein

the electronic apparatus further comprises:

an operation information input acceptor (hereinafter,
the second acceptor) for accepting input of second operation
information; and

25 a second operation information transmitter
(hereinafter, second transmitter) for transmitting the second

operation information, and the electronic apparatus identifier, to the server, and

the external apparatus further comprises:

5 an operation information acquisition information input acceptor (hereinafter, the third acceptor) for accepting input of operation information acquisition information including the electronic apparatus identifier;

10 an operation information acquisition command transmitter (hereinafter, the third transmitter) for transmitting an operation information acquisition command to the server, the command including the operation information acquisition information and the external apparatus identifier;

15 an operation information receiver (hereinafter, the second receiver) for receiving the second operation information acquired according to the operation information acquisition command; and

20 an operation information output part (hereinafter, the first output part) that outputs the second operation information.

3. The information processing system according to claim 1, wherein

the electronic apparatus further comprises:

25 an operation information input acceptor (hereinafter, second acceptor) for accepting input of second operation

information;

a second operation information transmitter
(hereinafter, second transmitter) for transmitting the second
operation information and the electronic apparatus identifier,
5 to the server, and

the server stores priority information that is information
showing which the first operation information or the second
operation information is given priority, when the server receives
first operation information from the external apparatus, and
10 second operation information from the electronic apparatus, and
the first updating part updates the operation information control
table, according to one of the first operation information and the
second operation information that is given priority according to the
priority information.

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4. The information processing system according to claim 1,
wherein

the system includes the plurality of external apparatuses,
and

20 the server stores priority information that is information
showing which information has priority among pieces of the first
operation information when the server receives the pieces of the
first operation information from the external apparatuses, and the
first updating part updates the operation information control table
25 according to one piece of the first operation information that is
given priority by the priority information and the priority

information.

5. The information processing system according to claim 1, wherein

5 the operation information control record further includes operation information transmission history information, the operation information transmission history information showing that the first operation information has been transmitted to the electronic apparatus, and the first updating part updates the
10 operation information transmission history information when the first operation information is transmitted to the electronic apparatus.

6. The information processing system according to claim 1,
15 wherein the acquirer regularly acquires operation information from the server.

7. The information processing system according to claim 1, wherein
20 the server notifies the electronic apparatus of the first operation information after updating, when the first updating part updates the operation information control table.

8. An information processing system including an electronic
25 apparatus, a server, and an external apparatus, wherein
the electronic apparatus comprises:

an electronic apparatus identifier storage (hereinafter, the third storage) for storing an electronic apparatus identifier, the electronic apparatus identifier identifying the electronic apparatus;

5 a status information storage (hereinafter, the fourth storage) for storing status information showing a status of the electronic apparatus; and

 an electronic apparatus status information transmitter (hereinafter, the fourth transmitter) for
10 transmitting the electronic apparatus identifier and the status information to the server,
the server comprises:

 a status information control table storage (hereinafter, the fifth storage) for storing a status information control
15 table including at least one status information control record including an external apparatus identifier that identifies the external apparatus, the electronic apparatus identifier, and the status information;

 an electronic apparatus status information receiver
20 (hereinafter, the third receiver) for receiving the electronic apparatus identifier and the status information from the electronic apparatus; and

 a status information updating part (hereinafter, the second updating part) for updating the status information
25 control table according to the electronic apparatus identifier and the status information received by the third receiver,

and

the external apparatus includes:

an external information storage (hereinafter, the sixth storage) for storing the external apparatus identifier;

5 a status acquisition information acceptor (hereinafter, the fourth acceptor) for accepting input of status acquisition information, the status acquisition information including the electronic apparatus identifier;

10 a status acquisition command transmitter (hereinafter, the fifth transmitter) for transmitting a status acquisition command including the external apparatus identifier stored in the sixth storage and the status acquisition information accepted by the fourth acceptor, to the server; and

15 a status information receiver (hereinafter, the fourth receiver) for receiving a status information acquired according to the status acquisition command.

9. The information processing system according to claim 8, wherein

20 the external apparatus further includes a status information output part (hereinafter, the second output part) for outputting the status information received by the fourth receiver.

10. The information processing system according to one of claim 25 1 and claim 8, wherein

the external apparatus identifier includes an IP address

defined in IP version 4, and identifying information inherent in the external apparatus.

11. The information processing system according to one of claim
5 1 and claim 8, wherein

the external apparatus identifier includes a host address in an IP address defined in IP version 6.

12. An electronic apparatus for use in an information processing
10 system, the system including the electronic apparatus, a server, and an external apparatus, the electronic apparatus comprising:

an acquirer for acquiring first operation information from the server, the electronic apparatus operating with the first operation information; and

15 a controller for directing so that the electronic apparatus operates according to the first operation information, wherein

the external apparatus includes:

a first storage for storing an external apparatus identifier, the external apparatus identifier identifying the
20 external apparatus;

a first acceptor for accepting input of an electronic apparatus identifier and the first operation information, the electronic apparatus identifier identifying the electronic apparatus;

25 a first transmitter for transmitting the external apparatus identifier, the electronic apparatus identifier, and

the first operation information, to the server, and
the server includes:

a second storage for storing an operation information
control table, the table including at least one operation
5 information control record, the record including the external
apparatus identifier, the electronic apparatus identifier, and
the first operation information;

a first receiver for receiving the external apparatus
identifier, the electronic apparatus identifier, and the first
10 operation information, from the external apparatus; and

a first updating part for updating the operation
information control table according to the external
apparatus identifier, the electronic apparatus identifier, and
the first operation information.

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13. The electronic apparatus according to claim 12, wherein the
acquirer acquires the operation information from the server
regularly.

20 14. An electronic apparatus for use in an information processing
system including the electronic apparatus, a server, and an
external apparatus, the electronic apparatus comprising:

a third storage for storing an electronic apparatus identifier,
the electronic apparatus identifier identifying the electronic
25 apparatus;

a fourth storage for storing status information, the status

information showing a status of the electronic apparatus; and

a fourth transmitter for transmitting the electronic apparatus identifier and the status information to the server, wherein

5 the server includes:

a fifth storage for storing a status information control table including at least one status information control record, the record including an external apparatus identifier, the electronic apparatus identifier, and the status
10 information, the external apparatus identifier identifying the external apparatus;

a third receiver for receiving the electronic apparatus identifier and the status information from the electronic apparatus; and

15 a second updating part for updating the status information control table according to the electronic apparatus identifier and the status information receive by the third receiver, and
the external apparatus includes:

20 a sixth storage for storing the external apparatus identifier;

a fourth acceptor for accepting input of status acquisition information, the status acquisition information including the electronic apparatus identifier;

25 a fifth transmitter for transmitting a status acquisition command including the external apparatus

identifier stored in the sixth storage and status acquisition information accepted by the fourth acceptor, to the server; and

5 a fourth receiver for receiving status information acquired according to the status acquisition command.

15. A server for use in an information processing system, the system including an electronic apparatus, the server, and an external apparatus, the server comprising:

10 a second storage for storing an operation information control table including at least one operation information control record, the record including an external apparatus identifier, an electronic apparatus identifier, and first operation information, the external apparatus identifier identifying the external apparatus, the
15 electronic apparatus identifier identifying the electronic apparatus, and the electronic apparatus operating with the first operation information;

a first receiver for receiving the external apparatus identifier, the electronic apparatus identifier, and the first
20 operation information, from the external apparatus; and

a first updating part for updating the operation information control table according to the external apparatus identifier, the electronic apparatus identifier, and the first operation information, wherein

25 the electronic apparatus includes:

an acquirer for acquires the first operation

information from the server; and

a controller for directing so that the electronic apparatus operates according to the first operation information, and

5 the external apparatus includes:

a first storage for storing the external apparatus identifier;

a first acceptor for accepting input of the electronic apparatus identifier and the first operation information; and

10 a first transmitter for transmitting the external apparatus identifier, the electronic apparatus identifier, and the first operation information, to the server.

16. The server according to claim 15, wherein the operation
15 information control record further includes operation information transmission history information, the operation information transmission history information showing that the first operation information has been transmitted to the electronic apparatus, and the first updating part updates the operation information
20 transmission history information, when the first operation information is transmitted to the electronic apparatus.

17. The server according to claim 15, wherein the server notifies
the electronic apparatus of the first operation information after
25 updating, when the first updating part updates the operation information control table.

18. A server for use in an information processing system, the system including an electronic apparatus, the server, and an external apparatus, the server comprising:

5 a fifth storage for storing a status information control table, the table including at least one status information control record, the record including an external apparatus identifier, an electronic apparatus identifier and status information: the external apparatus identifier identifying the external apparatus, the
10 electronic apparatus identifier identifying the electronic apparatus, and the status information showing a status of the electronic apparatus;

a third receiver for receiving a first electronic apparatus identifier and first status information from the electronic
15 apparatus; and

a second updating part for updating the status information control table according to the first electronic apparatus identifier and the first status information, wherein

the electronic apparatus includes:

20 a third storage for storing the first electronic apparatus identifier;

a fourth storage for storing the first status information;

a fourth transmitter for transmitting the first
25 electronic apparatus identifier and the first status information to the server, and

the external apparatus includes:

a sixth storage for storing the first external apparatus identifier;

5 a fourth acceptor for accepting input of status acquisition information, the status acquisition information including the first electronic apparatus identifier;

a fifth transmitter for transmitting a status acquisition command to the server, the command including the first external apparatus identifier stored in the sixth storage and the status acquisition information accepted by the fourth acceptor; and

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a fourth receiver for receiving status information acquired according to the status acquisition command.

15 19. An external apparatus for use in an information processing system, the system including an electronic apparatus, a server, and the external apparatus, the external apparatus comprising:

a first storage for storing an external apparatus identifier, the external apparatus identifier identifying the external apparatus;

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a first acceptor for accepting input of an electronic apparatus identifier and first operation information, the electronic apparatus identifier identifying the electronic apparatus and the electronic apparatus operating with the first operation information; and

25 a first transmitter for transmitting the external apparatus identifier, the electronic apparatus identifier, and the first

operation information, to the server, wherein

the electronic apparatus includes:

an acquirer for acquiring the first operation information from the server; and

5 a controller for directing so that the electronic apparatus operates according to the first operation information, and

the server includes:

10 a second storage for storing an operation information control table, the table including at least one operation information control record, the record including the external apparatus identifier, the electronic apparatus identifier, and the first operation information;

15 a first receiver for receiving the external apparatus identifier, the electronic apparatus identifier, and the first operation information, from the external apparatus; and

20 a first updating part for updating the operation information control table according to the external apparatus identifier, the electronic apparatus identifier, and the first operation information.

20. An external apparatus for use in an information processing system, the system including an electronic apparatus, a server, and the external apparatus, the external apparatus comprising:

25 a sixth storage for storing an external apparatus identifier, the external apparatus identifier identifying the external

apparatus;

a fourth acceptor for accepting input of status acquisition information including an electronic apparatus identifier, the electronic apparatus identifier identifying the electronic
5 apparatus;

a fifth transmitter for transmitting a status acquisition command and status acquisition information accepted by the fourth acceptor, to the server, the command including the external apparatus identifier stored in the sixth storage; and

10 a fourth receiver for receiving status information acquired according to the status acquisition command, wherein

the electronic apparatus includes:

a third storage for storing the electronic apparatus identifier;

15 a fourth storage for storing the status information;
and

a fourth transmitter for transmitting the electronic apparatus identifier and the status information, to the server, and

20 the server includes:

a fifth storage for storing a status information control table, the table including at least one status information control record, the record including the external apparatus identifier, the electronic apparatus identifier, and the status
25 information;

a third receiver for receiving the electronic apparatus

identifier and the status information, from the electronic apparatus; and

5 a second updating part for updating the status information control table according to the electronic apparatus identifier and the status information received by the third receiver.

21. The external apparatus according to claim 20 further comprising a second output part for outputting the status
10 information received by the fourth receiver.

22. A method of setting an electronic apparatus from an external apparatus in an information processing system, the system including the electronic apparatus, a server, and the external
15 apparatus, the method comprising:

accepting input of an electronic apparatus identifier and first operation information by the external apparatus, the electronic apparatus identifier identifying the electronic apparatus and the electronic apparatus operating with the first operation
20 information,;

transmitting an external apparatus identifier, the electronic apparatus identifier, and the first operation information, all preliminarily stored, from the external apparatus to the server, the external apparatus identifier identifying the external apparatus;

25 receiving the external apparatus identifier, the electronic apparatus identifier, and the first operation information, by the

server from the external apparatus;

updating an operation information control table including at least one operation information control record according to the external apparatus identifier, the electronic apparatus identifier, and the first operation information, the record including the external apparatus identifier, the electronic apparatus identifier, and the operation information, all stored in the server;

acquiring the first operation information by the electronic apparatus from the server; and

operating by the electronic apparatus according to the first operation information.

23. A method of acquiring a status of an electronic apparatus from an external apparatus in an information processing system, the system including the electronic apparatus, a server, and the external apparatus, the method comprising:

transmitting an electronic apparatus identifier and status information from the electronic apparatus to the server, the electronic apparatus identifier identifying the electronic apparatus, and the status information showing a status of the electronic apparatus;

receiving the electronic apparatus identifier and the status information, by the server from the electronic apparatus;

updating a status information control table including at least one status information control record, according to the electronic apparatus identifier and the status information received

from the electronic apparatus, the record including an external apparatus identifier, the electronic apparatus identifier, and the status information, all stored in the server, the external apparatus identifier identifying the external apparatus,;

5 accepting input of status acquisition information including the electronic apparatus identifier, by the external apparatus;

 transmitting a status acquisition command from the external apparatus to the server, the command including the external apparatus identifier preliminarily stored in the external apparatus

10 and status acquisition information accepted,; and

 receiving status information acquired according to the status acquisition command, by the external apparatus.